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Final Progress Report

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FNAS IMI Mission Evaluation

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CONTRACT ACTIVITIES

8th IMI SDT MEETING

On February 22 and 23, 1994 the eight meeting of the Inner Magnetospheric Imager (IMI) Science Definition Team (SDT) was held at the SAIC office at 400 Virginia Avenue, Suite 400, Washington, DC. SAIC handled all of the arrangements for the meeting and provided travel reimbursement for all eligible members of the SDT. SDT members present at the meeting included: T. Armstrong, L. Broadfoot, L. Frank, D. Gallagher, R. R. Meier, S. Mende, T. E. Moore, E. Roelof, M. Smith, J. Sojka, D. Williams and K. C. Heish. Those not present included: S. Chakrabarti, B. Mauk, D. McComas, and G. Parks.

The major topics discussed at the meeting included (1) plans for moving IMI forward, (2) IMI engineering and cost analysis, (3) a report on the status of the radio sounding instrument Report, and (4) writing plans for the full IMI report. In connection with the engineering analysis presentation, there were numerous detailed questions asked about elements of the design which were discussed with action items on the more important ones given. These details can be found in the full meeting report.

During the month of March I prepared a report describing in detail the topics covered at the meeting and delivered it to L. Johnson at MSFC.

9th IMI SDT MEETING

During the summer and fall of 1994 we made preparations for the ninth IMI SDT meeting which was scheduled to be held on December 15-16, 1994 in the Washington DC. area. We made arrangements for the meeting to be held at Nicholes Research Co. in Alexandria, VA and reserved rooms at the nearby Key Bridge Holiday Inn. SDT members present at the meeting included: T. Armstrong, L. Broadfoot, S. Chakrabarti, L. Frank, D. Gallagher, B. Mauk, R. R. Meier, S. Mende, T. E. Moore, G. Parks, M. Smith, and D. Williams. Those not present included: K. C. Heish, D. McComas, E. Roelof, and J. Sojka.

The first day of the meeting was set aside for individuals who had received funding under the Marshall Space Flight Center NRA8-8 ("Techniques and Technologies for Magnetospheric Imaging") to present reports of their research work to the IMI SDT and individuals from NASA headquarters. Since some of those who received funding under this NRA were not members of the IMI SDT we secured approval from MSFC to add these people to the list so that they could be reimbursed for their travel under the same contract that is used for the IMI SDT members. The individuals added to the list were: Wynne Calvert (Univ of Iowa), Bodo Reinisch (Univ of Massachusetts at Lowell), Jack Quinn (Lockheed, Palo Alto), and Herb Funsten (Los Alamos). The December 15th NRA review portion of the IMI SDT meeting went smoothly with all individuals scheduled making their reports. A report containing presentation materials from this meeting was prepared and distributed by Les Johnson at MSFC.

The second day of the IMI SDT meeting was devoted to discussion of the IMI SDT final report. Tom Armstrong passed out a draft copy that he had prepared with inputs from various team members. The draft was reviewed and corrections made, especially to the measurement parameters table which appeared at the beginning of the report. Because a number of important sections were either missing or only partially complete assignments were given to various team members to finish the write up of these sections and submit that to Tom Armstrong by January 6th. Some additional material was also volunteered by various individuals to fill out the report.

TECHNICAL REVIEW OF FUV AND EUV IMAGING

During the summer and fall of 1994 we spent time gathering and evaluating material related to ultraviolet auroral and 304 Å plasmasphere imaging instrumentation. A report containing this information and the results of the study is in preparation and will be delivered to MSFC soon.